GEMINI

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Laser Direct Imaging, a profitable GEMINI reality for your shop

BARCO

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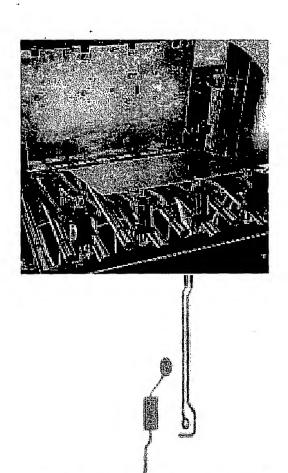
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Automation

Panels may be input and output from the front or side of the GEMINI, and output with the same options. This can either be done by an operator, or by a conveyor.

Automation reduces the need for operators, this is obvious. A more important advantage, however, is improved imaging quality: every time an operator puts his hands into the imaging chamber to load, flip or unload a panel, contamination and handling defects are introduced. Automation means better yields.

- Reduced staff requirements
- · Higher throughput and repeatability
- Completely sealed imaging chamber, class 1,000 inside
- Flexibility: multiple jobs and lots can be mixed and run together

BOARD STATION: all-digital workflow management

Since LDI is an expensive and crucial piece of capital equipment, its utilization must be maximized. An all-digital workflow requires all-digital workflow management: BOARDSTATION.

BOARDSTATION stores all information in a database: job info, progress info, queue info, LDI machine status, job in progress, priorities.BOARDSTATION can manage the workflow of the whole department, change priorities, reroute jobs, and check machines. Data can be input from any CAM system.

User access is via the ubiquitous browser. BOARDSTATION is accessible from everywhere over the company network if you have the proper access rights, if desired even over the Internet: Barco service personnel could then review your LDI machine error log over the Internet.

- · Multi-level user interface creates different security levels
- Variable customer info printed on each panel
- Manages the entire digital workflow

System architecture

- · Open laser source platform
- Open architecture guarantees future upgrade flexibility
- Vibration-free design secures optimum image quality
- Smart design optimizes quick serviceability

Main Specifications

Panel size

Minimum panel size Maximum panel size

Panel thickness

24.5" x 32" 0.002" - 0.200"

14" x 16"

Throughput

Up to 240 sides (120 panels)

per hour

With a 10 mJ/cm2 resist sensitivity, 18" x 24",

includes handling

2000 or 4000 dpi

Panel switch time

10 s

Imaging

Resolutions

Minimum feature size

Imaging accuracy

Front-back registration

2.0 mils

± 0.5 mils (over 18" x 24") ± 0.25 mils (over 18" x 24")

Laser

Solid State laser

Wavelength

355 nm

Photo-resist

Type

Thickness range Sensitivity

Conventional and LDI resists compatible Working mode

Dry film over substrate

0.8 - 2.0 mils60 mJ/cm2 or faster

Positive or negative

Registration

Mechanical panel preregistration

Fine registration with CCD cameras, transmission and reflection

Side-to-side registration intrinsic in optical system

Environment

Room temperature Room humidity Clean room

20°C to 25°C

40 to 60% relative humidity

Class 10,000

Dimensions

Size (L x W x H)

Weight

4.0 m x 1.5 m x 1.8 m

4000 kg



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